In the Claims

Please add new claims 15-36 as follows:

WHAT IS CLAIMED IS:

1. (Original) A sheet of glass having an interior surface bearing a reflective coating thereon and an exterior surface bearing a water-sheeting coating thereon, the reflective coating comprising a reflective metal layer and at least one dielectric layer, the water-sheeting coating comprising silica sputtered directly onto the exterior surface of the sheet of glass, the water-sheeting coating having an exterior face which is substantially non-porous but which has an irregular surface, the water-sheeting coating reducing the contact angle of water on the coated exterior surface of the glass article below about 25° and causing water applied to the coated exterior surface of the pane to sheet.

2. (Original) The invention of claim 1 wherein the reflective coating is an infrared reflective coating comprising, in sequence moving outwardly from the interior surface of the sheet of glass, said at least one dielectric layer, the reflective metal layer and a second dielectric layer, the infrared reflective coating having a transmittance of at least about 70% in the visible spectrum.

3. (Original) The invention of claim 1 further comprising a spacer and a second sheet of glass having an interior surface, the spacer being disposed between the interior surfaces of the sheets of glass and serving to maintain those interior surfaces in a spaced-apart parallel relationship and defining an interpane space therebetween.

4. (Original) The invention of claim 1 further comprising a tear-resistant plastic film and a second sheet of glass having an interior surface, the resilient plastic film being bonded on

one side to the interior surface of one of the sheets of glass and on its other side to the interior surface of the other sheet of glass, thereby forming a laminate structure.

5. (Original) A method of rendering a surface of a pane of glass resistant to soiling and staining, comprising:

providing a sheet of glass having a clean interior surface and a clean exterior surface;

coating the interior surface of the sheet of glass with a reflective coating by sputtering, in sequence, at least one first dielectric layer, at least one metal layer, and at least one second dielectric layer;

coating the exterior surface of the glass with a water-sheeting coating by sputtering silica directly onto the exterior surface of the sheet of glass.

6. (Original) The method of claim 5 wherein the layer of silica is sputtered onto the exterior surface of the glass by sputtering a silicon target in an oxygen-containing sputtering chamber.

7. (Original) The method of claim 5 wherein the sheet of glass is passed through a series of sputtering chambers retaining a corresponding series of sputtering targets spaced outwardly from the interior surface of the sheet of glass, the first dielectric layer being applied in a first of the sputtering chambers, the metal layer being applied in a second of the sputtering chambers and the second dielectric layer being applied in a third of the sputtering chambers.

8. (Original) The method of claim 7 wherein one of the first and third sputtering chambers includes a silicon-containing target spaced outwardly from the exterior surface of the sheet of glass, the water-sheeting coating being applied by sputtering the silicon-

containing target in the same sputtering chamber in which one of the dielectric layers is applied.

9. (Original) The method of claim 8 wherein the sputtering chamber within which the silicon-containing target is retained is provided with an oxidizing sputtering atmosphere.

10. (Original) A method of rendering a surface of a pane of glass resistant to soiling and staining, comprising:

providing a sheet of glass having a clean interior surface and a clean exterior surface and a sputtering line comprising a series of sputtering chambers each having a support for a sheet of glass therein, at least one of the sputtering chambers comprising a downward sputtering chamber having an upper target positioned above the support, a second of the sputtering chambers comprising an upward sputtering chamber having a lower target positioned below the support;

positioning the sheet of glass on the support in the downward sputtering chamber such that the interior surface is oriented toward the upper target and sputtering the upper target to deposit a dielectric layer on one of the interior surface of the glass or a film stack layer previously deposited on the interior surface of the glass;

positioning the sheet of glass on the support in the upward sputtering chamber such that the exterior surface is oriented toward the lower target and sputtering the lower target to deposit a water-sheeting coating on the exterior surface of the glass.

11. (Original) The method of claim 10 wherein the upward sputtering chamber further comprises an upper target positioned above the support, further comprising sputtering the upper target to deposit a dielectric layer on one of the interior surface of the glass or a

film stack layer previously deposited on the interior surface of the glass while the sheet of glass remains in the upward sputtering chamber.

12. (Original) A method of rendering a surface of a pane of glass resistant to soiling and staining, comprising:

providing a sheet of glass having a clean interior surface and a clean exterior surface and a sputtering line comprising a series of sputtering chambers each having a support for a sheet of glass therein, at least one of the sputtering chambers comprising a dual direction sputtering chamber having an upper target positioned above the support and a lower target positioned below the support;

positioning the sheet of glass on the support in the dual direction sputtering chamber such that the interior surface is oriented toward the upper target and the exterior surface is oriented toward the lower target; and

while the sheet of glass remains in the dual direction sputtering chamber

i) sputtering the upper target to deposit a dielectric layer on one of the interior surface of the glass or a film stack layer previously deposited on the interior surface of the glass; and

ii) sputtering the lower target to deposit a water-sheeting coating on the exterior surface of the glass.

13. (Original) A method of coating two sides of a single pane of glass in a single pass through a coating apparatus, comprising:

providing a sheet of glass having a clean interior surface and a clean exterior surface and a sputtering line comprising a series of sputtering chambers each having a support for a sheet of glass therein, at least one of the sputtering chambers comprising a

downward sputtering chamber having an upper target positioned above the support, a second of the sputtering chambers comprising an upward sputtering chamber having a lower target positioned below the support;

positioning the sheet of glass on the support in the downward sputtering chamber such that the interior surface is oriented toward the upper target and sputtering the upper target to deposit a coating directly on one of the interior surface of the glass or a film stack layer previously deposited on the interior surface of the glass;

positioning the sheet of glass on the support in the upward sputtering chamber such that the exterior surface is oriented toward the lower target and sputtering the lower target to deposit a coating on one of the exterior surface of the glass or a film stack layer previously deposited on the exterior surface of the glass,

the glass being coated on both the interior surface and the exterior surface while maintaining a constant orientation wherein the interior surface is positioned above the exterior surface.

14. (Original) The method of claim 13 wherein the lower target comprises silicon, said lower target being sputtered in an oxidizing atmosphere to deposit a water-sheeting coating directly on the exterior surface of the glass.

15. (New) The sheet of glass of claim 1 wherein the water-sheeting coating has a median thickness of between about 15Å and about 350Å.

16. (New) The sheet of glass of claim 1 wherein the water-sheeting coating has a median thickness of between about 15Å and about 150Å.

17. (New) The sheet of glass of claim 1 wherein the water-sheeting coating has a median thickness of between about 20Å and about 120Å.

18. The sheet of glass of claim 1 wherein the water-sheeting coating has a median thickness selected from the group consisting of 35Å, 50Å, and 100Å.

19. (New) The sheet of glass of claim 1 wherein the exterior face of the water-sheeting coating has a series of irregularly spaced and sized peaks.

20. (New) The sheet of glass of claim 1 wherein said reflective metal layer comprises silver.

21. (New) The sheet of glass of claim 1 wherein said reflective coating comprises two reflective metal layers.

22. (New) The method of claim 13 wherein the support comprises spaced-apart transport rollers, the lower target being sputtered upwardly between such rollers.

23. (New) The method of claim 13 wherein the sheet of glass is conveyed horizontally over the transport rollers during said sputtering of the lower target and during said sputtering of the upper target.

24. (New) The method of claim 23 wherein the sheet of glass is conveyed over the transport rollers so that the coating deposited on the exterior surface of the glass sheet comes into direct contact with the transport rollers.

25. (New) The method of claim 13 wherein said coating sputtered downwardly from the upper target is part of a film stack comprising a series of distinct layers, wherein said coating sputtered upwardly from the lower target is a water-sheeting coating, and wherein said film stack has a greater thickness than the water-sheeting coating.

26. (New) The method of claim 13 wherein said coating deposited by sputtering the lower target upwardly is a water-sheeting coating, and wherein said coating deposited by sputtering the upper target downwardly is part of a low-emissivity film stack.

27. (New) The method of claim 26 wherein said coating deposited by sputtering the upper target downwardly is a dielectric layer of the low-emissivity film stack.

28. (New) The method of claim 26 wherein said water-sheeting coating is deposited in a last of the sputtering chambers in the sputtering line.

29. (New) The method of claim 26 wherein said water-sheeting coating is deposited to a median thickness of between about 15Å and about 150Å.

30. (New) A coating apparatus for coating two sides of a single pane of glass in a single pass through the coating apparatus, the coating apparatus comprising a support for supporting the pane of glass horizontally in the coating apparatus, the support comprising a series of spaced-apart transport rollers, an upper sputtering target positioned above the support within a chamber of the coating apparatus for sputtering a coating onto the upper surface of the pane of glass, and a lower sputtering target positioned below the support within a chamber of the coating apparatus for sputtering a coating onto the lower surface of the pane of glass.

31. (New) The coating apparatus of claim 30 wherein the upper sputtering target and the lower sputtering target are both in the same chamber of the coating apparatus.

32. (New) The coating apparatus of claim 30 wherein the upper sputtering target is in a first chamber and the lower sputtering target is in a second chamber.

33. (New) The coating apparatus of claim 30 wherein the coating apparatus includes further chambers each including an upper or lower sputtering target provided above or below the support respectively.

34. (New) The coating apparatus of claim 30 comprising a lower anode proximate the lower target, and an upper anode proximate the upper target.

35. (New) The coating apparatus of claim 30 comprising a lower gas distribution pipe located below the support adjacent the lower target, and an upper gas distribution pipe located above the support adjacent the upper target.

36. (New) A method of coating two sides of a single pane of glass in a single pass through a coating apparatus, comprising:

providing a sheet of glass having an interior surface and an exterior surface and a sputtering line comprising a series of sputtering chambers each having a support for a sheet of glass therein, the support comprising a series of spaced-apart transport rollers, at least one of the sputtering chambers comprising a downward sputtering chamber having an upper target positioned above the support, a second of the sputtering chambers comprising an upward sputtering chamber having a lower target positioned below the support;

conveying the sheet of glass horizontally through the downward sputtering chamber on transport rollers such that the interior surface is oriented toward the upper target and the exterior surface is in direct contact with such transport rollers, sputtering the upper target downwardly to deposit a coating on the interior surface, wherein the coating deposited by downwardly sputtering the upper target is part of a low-emissivity film stack; and

conveying the sheet of glass horizontally through the upward sputtering chamber on transport rollers such that the exterior surface is oriented toward the lower target and is in direct contact with such transport rollers, sputtering the lower target to deposit a coating on the exterior surface, the lower target being sputtered upwardly between transport rollers in the upward sputtering chamber, wherein

said coating deposited by sputtering the lower target upwardly is a water-sheeting coating, and wherein said water-sheeting coating on the exterior surface comes into direct contact with transport rollers in the upward sputtering chamber during said conveyance of the sheet of glass through the upward sputtering chamber.